CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 86-84
NPDES NO. CA0029092

WASTE DISCHARGE REQUIREMENTS FOR:

HEWLETT-PACKARD COMPANY
974 E. ARQUES AVENUE FACILITY
SUNNYVALE, SANTA CLARA COUNTY

The California Regional Water quality Control Board, San Francisco Bay Region (hereafter called the Board), finds that:

1. Hewlett-Packard Company (hereinafter called the discharger) manufacturers computer products at a facility located at 974 E. Arques Avenue, Sunnyvale. By application dated August 8, 1986, the discharger has applied for issuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).

2. Studies by the discharger show that groundwaters beneath the site have been polluted by organic solvents such as Trichloroethylene (TCE), 1,1,1 Trichloroethane (TCA), 1,1-Dichloroethane, Trans-1,2-dichloroethylene, 1,1-Dichloroethene, Freon 113, and Perchloroethylene (PCE). Pollutant concentrations in upgradient monitoring wells suggests migration of similar chemicals from offsite sources; however, there is also evidence of one possible isolated source on the property itself.

3. Waste 001 is expected to consist of an average of 30,000 gallons per day of polluted groundwater from Basement Sump B though this may increase to as much as 80,000 gpd. Waste 002 is expected to consist of an average of 5,000 gallons per day of polluted groundwater from Basement Sump D though this may increase to as much as 8,000 gpd. These sumps lower the groundwater table to prevent flooding of the basement of Building 71. The groundwater entering the sumps will be treated with diffused air stripping and discharged to the storm drain system along Arques Avenue tributary to Calabazas Creek, and South San Francisco Bay.

4. A Water Quality Control Plan for the San Francisco Bay Basin was adopted by the Board on July 21, 1982. The Basin Plan contains water quality objectives for Calabazas Creek and South San Francisco Bay.

5. The beneficial uses of Calabazas Creek include:

: Groundwater recharge
: Navigation
: Contact and non-contact water recreation
: Warm fresh water and cold fresh water habitat
: Wildlife habitat

6. The beneficial uses of South San Francisco Bay include:

: Non-contact water recreation
: Wildlife habitat
: Preservation of rare and endangered species
: Esturaine habitat
: Warm fresh water and cold fresh water habitat
: Fish spawning and migration
: Industrial service supply
: Shellfishing
: Navigation
: Open commercial and sport fishing

7. The groundwater recharge use of Calabazas Creek will be protected by the effluent Limits of this Order because studies indicate that the clay liner of the creek will preclude significant recharge of the creek banks and underlying aquifers.

8. The Basin Plan prohibits discharge of wastewater which has "particular characteristics of concern to beneficial uses" (a) "at any point in San Francisco Bay south of the Dumbarton Bridge" and (b) " at any point where the wastewater does not receive a minimum initial dilution of at 10:1 or into any nontidal water, deadend slough, similar confined water, or any immediate tributary thereof".

9. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 8 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.

10. Exceptions to the prohibitions referred to in Finding 8 are warranted because the discharge is an integral part of a program to cleanup polluted groundwater and thereby produce an environmental benefit, and because receiving water concentrations are expected to be below levels that would effect beneficial uses. Should studies indicate chronic effects no currently anticipated, the Board will review the requirements of this order based up Section B.1.e.

11. The Basin Plan prohibits discharge of "all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of

the Basin." The discharger's groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes an acceptable control program for minimizing the discharge of toxicants to waters of the State.

12. Effluent limitations of this Order are based on the Basin Plan, State Plans and policies, and best engineering judgment. Justifications for the proposed effluent limitation are discussed in detail in Regional Board's guidance document entitled "Discharge of Polluted Groundwater to Surface Waters", dated September 1985.

13. The issuance of waste discharge requirements for this discharge is exempt form the provisions of Chapter 3 (commencing with section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

14. The Board has notified the discharger and interested agencies and persons of its intent to issue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

15. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Effluent Limitations

1. Neither the discharge of Waste 001 nor the discharge of Waste 002 shall contain constituents in excess of the following:

Constituent	Units	Daily Maximum
Total concentration of all synthetic volatile organic compounds*	mg/l	0.100

* Defined as the following halogenated hydrocarbon compounds and associated isomers: trichloroethane, dichloroethane, trichloroethylene, dichloroethylene, tetrachloroethylene, and freon 113.

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. In any representative set of samples, the discharge of Waste shall meet the following limit of quality:

TOXICITY:

The survival of test fishes in 96 hour bioassays of the effluent as discharged shall be a median of 90% survival and a 90 percentile value of not less than 70 percent survival.

B. Receiving Water Limitations

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place:

a. Floating, suspended, or deposited macroscopic particulate matter or foam;

b. Bottom deposits or aquatic growths;

c. Alternation of temperature or apparent color beyond present natural background levels;

d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within on foot of the surface:

a. Dissolved oxygen — 5.0 mg/l minimum -median for any three consecutive months no less than 80% saturation. When natural factors cause lesser concentration (s) than specified above, the discharge shall not cause further reduction of the concentration of dissolved oxygen.

b.	pH	Variation from natural ambient pH by more than 0.5 pH units.

3. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

C. Provisions

1. The discharger shall comply with all sections of this order immediately upon adoption.

2. The discharger shall comply with the self-monitoring program as adopted by the Board and as any be amended by the Executive Officer.

3. The discharger shall notify the Regional Board if any activity has occurred or will occur which would result in the discharge, on a frequent or routine basis, of any toxic pollutant which is not limited by this Order.

4. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977, except items A.5, A.12, B.3, B.5, C.2, and C.4. The Board is considering revising the "Standard Provisions, Reporting Requirements and Definition", and intends to amend this Order to include the revised version following its adoption.

5. This Order expires November 19, 1991. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

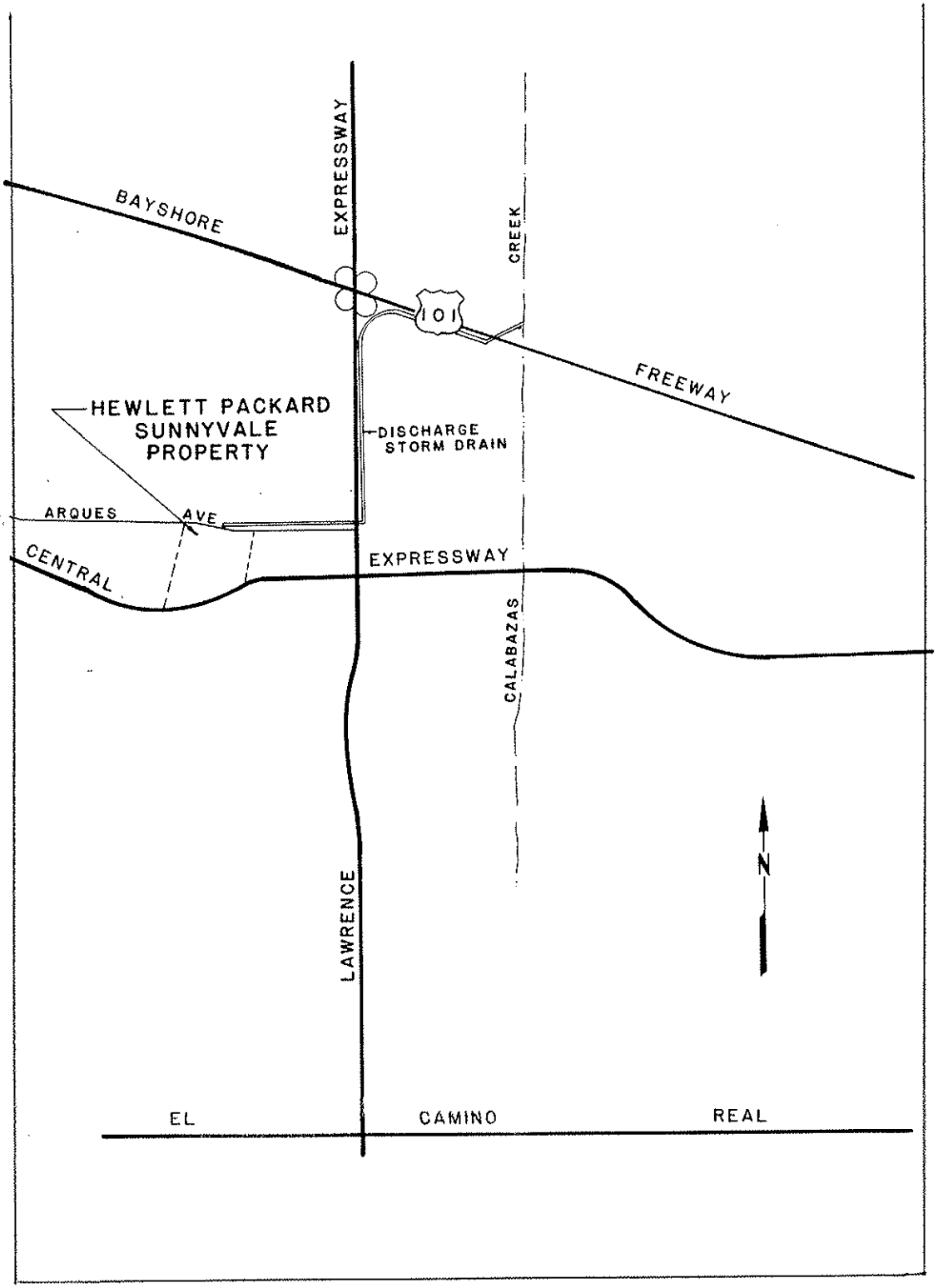
6. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant or Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of this adoptionprovided the Regional Administrator, Environmental Protection Agency, has on objection. If the Regional administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certifythe foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on November 19, 1986.

ROGER B. JAMES
Executive Officer

Attachments:

Standard Provisions & Reporting Requirements, April 1977
Self-Monitoring Program



LOCATION MAP:

Hewlett-Packard Company
974 E. Arques Avenue
Sunnyvale, California 94086

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

A. GENERAL

Reporting responsibilities of waste dischargers are specified in Sections 13225 (a), 13267 (b), 13268, 13383, and 13387 (b) of the California Water Code and this Regional Board's Resolution No. 73-16.

Theprincipal purposes of a monitoring program by a waste discharge, also referred to as self-monitoring program, are: (1) to document compliance with waste discharge requirements and prohibitions established by this Regional Board, (2) to facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge, (3) to develop or assist in the development of effluent or other limitations, discharger prohibitions, national standards of performance, pretreatment and toxicity standards, and other standards, and (4) to prepare water and wastewater quality inventories.

B. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analyses shall be performed according to the latest edition of Standard Methods for the Examination of Water and Wastewater prepared and published jointly by the American Public Health Association, American Water Works Association, and Water Pollution Control Federation, EPA Standard Method, 40 CFR Part 136, Vol 40, No. 209, dated October 26, 1984, or other methods approved and specified by the Executive Officer of this Regional Board.

C. REPORTS TO BE FILED WITH THE REGIONAL BOARD

1. Violations of Requirements

In the event the discharger is unable to comply with the conditions of the waste discharge requirement and prohibitions due to:

(a) maintenance work, power failures, or breakdown of waste treatment equipment, or

(b) accidents caused by human error or negligence, or

(c) other causes such as acts of nature,

(d) poor operation or inadequate system design,

the discharger shall notify the Regional Board office by telephone as soon as he or his agents have knowledge of the incident and confirm this notification on writing within two weeks of the telephone notification. The written report shall include pertinent information explaining reasons for the noncompliance and shall indicate what steps were taken to prevent the problem from recurring.

The discharger shall file a written technical report at least 15 days prior to advertising for bid on any construction project which would cause or aggravate the discharge of waste in violation of requirements; said report shall describe the nature, costs and scheduling of all action necessary to preclude such discharge.

In addition, if the noncompliance caused by items (a), (b), (c) or (d) above is with respect to any of effluent limits, the waste discharger shall promptly accelerate his monitoring program as required by the Board's Executive Officer for those constituents which have been violated. Such analysis shall continue until such times as the effluent limits have been attained, or until such time as the Executive Officer determines to be appropriate. The results of such monitoring shall be included in the regular self-Monitoring Report.

2. Bypass Reports

Bypassing reporting shall be an integral part of regular monitoring program reporting. A report on bypassing of untreated waste or bypassing of any treatment units shall be made which will include cause, time and date, duration and estimated volume bypassed, method used in estimating volume, and persons and agencies notified. Notification to the Regional Board shall be made immediately by telephone (415) 464-1255, followed by a written account within 15 days.

3. Self-Monitoring Reports

a. Reporting Period:

Written reports shall be filed regularly for each month by the thirtieth day of the following month.

b. Letter of Transmittal

A letter transmitting self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violation found during the reporting period and actions taken or planned for correction any requirement violation. If the discharger has previously submitted a detailedtime schedule for correction requirement violations, a reference to this correspondence will be satisfactory.

Monitoring reports and the letter transmitting reports shall be signed by either a principal executive officer or his duly authorized employee. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true and correct.

C. Data Results:

(1) Results from each required analysis and observation shall be submitted in the monthly self-monitoring report. Results shall also be submitted for any additional analyses performed by the discharger for parameters for which effluent limits have been established by the Board.

(2) The report shall include a discussion of unexpected operational changes which could affect performance of the treatment system, such as flow fluctuations, maintenance shutdown, etc.

(3) The report shall also include a table identifying by method number the analytical procedures used for analyses. Any special methods shall be identified and should have prior approval of the Board's Executive Officer.

(4) Laboratory results should be copied and submitted as appendix to the regular report.

(5) A map shall accompany the report, showing sampling locations and flow path to receiving waters as appropriate.

(6) The report shall include an annual waste summary for the current year for each parameter of the attached Table 1 showing the minimum, maximum, and average value for the month. The report for December shall include minimum, maximum and average for the year. All monitoring results shall be presented in a tabular format.

D. DESCRIPTION OF SAMPLING STATIONS

1. Description of Sampling Stations

a. INFLUENT

Station	Description
A-001	At a point in the groundwater collection system (Sump B) immediately prior to the treatment system.
A-002	At a point in the groundwater collection system (Sump D) immediately prior to the treatment system.

b. EFFLUENT

Station	Description
E-001	At a point in the outfall line immediately following the groundwater treatment system for sump B.
E-002	At a point in the outfall line immediately following the groundwater treatment system for sump D.

c. RECEIVING WATERS

Station	Description
C-001	At a point in Calabazas Creek at least 100 feet but not more than 200 feet down stream from stormsewer discharge point.

E. SCHEDULE OF SAMPLING AND ANALYSIS

The schedule of sampling and analysis shall be that given as Table I.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 86-84.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date: NOVEMBER 25, 1986

Attachment: Table I

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A001	A002	E001	E002	C001								
TYPE OF SAMPLE	G	G	G	G	G								
Flow Rate (mgd)	D	D	D	D									
BOD, 5-day, 20°C, or COD (mg/l & kg/day)													
Chlorine Residual & Dosage (mg/l & kg/day)													
Settleable Matter (ml/1-hr. & cu. ft./day)													
Total Suspended Matter (mg/l & kg/day)	Q	Q	Q	Q									
Oil and Grease (mg/l & kg/day)													
Coliform (Total or Fecal) (MPN/100 ml) per req't													
Fish Tox'y 96-hr. TL % Surv'l in undiluted waste			Y	Y									
Ammonia Nitrogen (mg/l & kg/day)			Y	Y									
Nitrate Nitrogen (mg/l & kg/day)													
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)													
Total Phosphate (mg/l & kg/day)													
Turbidity (Jackson Turbidity Units)													
pH (units)			M	M									
Dissolved Oxygen (mg/l and % Saturation)			Q	Q									
Temperature (°C)			Q	Q									
Apparent Color (color units)													
Secchi Disc (inches)													
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)													
Arsenic (mg/l & kg/day)													
Cadmium (mg/l & kg/day)													
Chromium, Total (mg/l & kg/day)													
Copper (mg/l & kg/day)													
Cyanide (mg/l & kg/day)													
Silver (mg/l & kg/day)													
Lead (mg/l & kg/day)													

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Sampling Station	A001	A002	E001	E002	C001								
TYPE OF SAMPLE	G	G	G	G	G								
Mercury (mg/1 & kg/day)													
Nickel (mg/1 & kg/day)													
Zinc (mg/1 & kg/day)													
Phenolic Compounds (mg/1 & kg/day)													
All Applicable Standard Observations													
Bottom Sediment Analyses and Observations													
Total Ident. Chlor. Hydrocarbons (mg/1 & kg/day)													
Trichloroethene	M/Q	M/Q	W/Q	W/Q	Q								
Trichloroethane	M/Q	M/Q	W/Q	W/Q	Q								
Trichlorotrifluoroethane	M/Q	M/Q	W/Q	W/Q	Q								
Trichlorotrifluoromethane	M/Q	M/Q	W/Q	W/Q	Q								
Trans-1,2-Dichloroethene	M/Q	M/Q	W/Q	W/Q	Q								
Total Synthetic Volatile Organic Compounds	M/Q	M/Q	W/Q	W/Q	Q								

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour
C-X = composite sample - X hours (used when discharge does not continue for 24-hour period)
Cont = continuous sampling
DI = depth-intergrated sample
BS = bottom sediment sample
O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
A = treatment facility influent stations
E = waste effluent stations
C = receiving water stations
P = treatment facilities perimeter stations
L = basin and/or pond levee stations
B = bottom sediment stations
G = groundwaters stations

FREQUENCY OF SAMPLING

E = each occurence
H = once each hour
D = once each day
W = once each week
M = once each month
Y = once each year

2/H = twice per hour
2/W = 2 days per week
5/W = 5 days per week
2/M = 2 days per month
2/y = once in March and once in September
Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
2D = every 2 days
2W = every 2 weeks
3M = every 3 months
Cont = continuous

M/Q = Monthly for 3 months, quarterly thereafter
W/M = Weekly for 3 months, monthly thereafter